

Supplementary data

Table S1: Clinical characteristics from 38 patients diagnosed with T-cell ALL in Sweden, 1998-2006

| Characteristics | Number of patients (total n = 38) |
|--|-----------------------------------|
| Gender | |
| Female | 6 |
| Male | 32 |
| Age at diagnosis (years) | |
| 1-5 | 12 |
| >5-10 | 15 |
| >10-17 | 11 |
| Leukocytes at diagnosis (x10⁹/L) | |
| <50 | 2 |
| ≥50-100 | 4 |
| >100 | 18 |
| Missing data | 14 |
| Hematopoietic stem cell transplantation | |
| Yes | 19 |
| No | 19 |
| Relapse | |
| Yes | 11 |
| No | 27 |
| Overall survival ≥ 5 years | |
| Yes | 28 |
| No | 10 |

Table S2: Karyotype for the studied patients diagnosed with T-ALL between 1998 and 2006.

| No. | Gender | Age at diagnosis (years) | Karyotype |
|-----|--------|--------------------------|--|
| 1 | Male | 10 | 46,XY[6] |
| 2 | Female | 8 | 46,XX,t(6;11)(q26-27;q23),der(12)t(12;17)(p11.2;q23) |
| 3 | Male | 13 | 46,XY |
| 4 | Male | 2 | 46,XY[25] |
| 5 | Male | 12 | 46,XY,?t(2;10)(p2?;p?) [4]/46,idem,t(2;9)(p1?;p?) [5]/46,XY[3] |
| 6 | Male | 12 | 46,XY |
| 7 | Female | 3 | 46,XX pb |
| 8 | Male | 4 | 46,XY,add(9)(p13)[29]/46,XY[20] |
| 9 | Male | 9 | 46,XY,add(3)(p13)[13]/46,XY[1] |

| | | | |
|----|--------|----|--|
| 10 | Female | 13 | 46,XX[16] |
| 11 | Male | 2 | 46,XY[17] |
| 12 | Male | 9 | 46,XY[20] |
| 13 | Male | 9 | 47,XY,i(9)(q10),t(10;11)(p13;q14),+der(19)[13]/46,XY[15] |
| 14 | Female | 13 | 46,XX[11] |
| 15 | Male | 11 | 46,XY[21] |
| 16 | Male | 9 | 44-46,XY,add(2)(p23),t(11;14)(p13;q11)[14]/46,XY[16] |
| 17 | Male | 7 | .ish.?,X?,del(9)(p21p21)x2 |
| 18 | Male | 6 | 45-46,XY,add(1)(p36),-5,t(8;14)(q24;q11),i(9)(q10),-16,+2mar[cp23]/46,XY[1] |
| 19 | Male | 4 | 45,XY,-1,-3,-3,-4,-5,-6,-8,-10,del(11q),-12,-12,-15,mar,inc[cp21]/46,XY[1] |
| 20 | Male | 4 | 47,XY,del(6)(q23),+8[9]/46,XY[16] |
| 21 | Male | 8 | 46,XY,del(5)(q?),der(14)ins(14;5)(q11;q?q?).nucish.del(9)(p21p21) |
| 22 | Male | 2 | 46,XY[21].ish.del(9)(p21p21)[79%] |
| 23 | Male | 5 | 46,XY,t(7;9)(q3?4;q3?2)[10].ish.del(9)(p21p21)x2,der(11)t(7;11)(q3?4;p1?3)/46,XY[15] |
| 24 | Male | 3 | 45,XY,dic(9;20)(p13;q11)[3]/46,XY[21] |
| 25 | Male | 10 | 46,XY,der(9)t(7;9)(q21;p13)[22]/46,XY[8] |
| 26 | Male | 14 | 47,XY,+der(6)t(6;7)(q12;q31),t(11;19)(q23;p13) |
| 27 | Male | 10 | 46,XY[21] pb |
| 28 | Male | 1 | 47,XY,+10,add(11)(q23).ish.der(11)(q23)/46,XY |
| 29 | Male | 3 | 46,XY[25] |
| 30 | Female | 14 | Missing data |
| 31 | Male | 17 | Missing data |
| 32 | Male | 8 | Missing data |
| 33 | Male | 9 | 47,XY,+9[7]/46,XY[16] |
| 34 | Male | 7 | 46,XY,inv(9)(p11q13)c |
| 35 | Male | 13 | 46,XY[24] |
| 36 | Male | 9 | 46,XY,+mar,inc[2]/46,XY[25].ish.del(9)(p21p21) |
| 37 | Male | 14 | 45,XY-9,inc |
| 38 | Female | 2 | 46,XX,t(11;20)(q23;q?)[21]/46,XX[8] |

Primer sequences used for *STIL-TALI* analysis:

First reactions: *STIL* 5' AAGGGGAGCTAGTGGGAGAAA 3', *TALI* I 5' AGAGCCTGTCGCCAAGAA 3' and *TALI* II 5' TTGTAATAATGGGGAGATAATGTCGAC 3'

Second nested reactions: *STIL* 5'AAATTAAGCAGTGAAATCCT 3', *TALI* I
5'GAAGACCACATTAGAAGCA 3' and *TALI* II
5'CGACGTCACAAAGTTATGAGAACTAA 3'

Primer sequences for *NRAS* gene, used as integrity control.

Forward 5' CTGGTGTGAAATGACTGAGT 3'

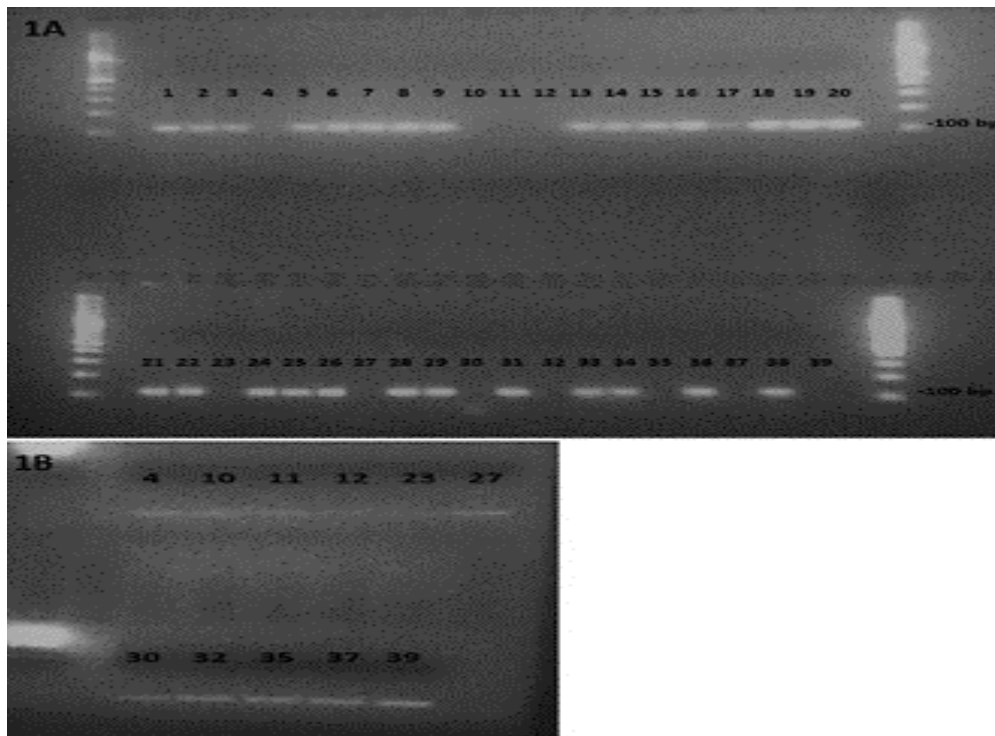
Reverse 5'GGTGGGATCATATTCATCTA 3'

***NRAS* integrity controls:**

Figure S1: *NRAS* control NBS.

A: WGA using 2.5µl NBS DNA. 28 positive samples and 11 negative samples after two sets of PCRs, using 2µl of WGA NBS DNA in first PCR and 2µl of first PCR reaction in second PCR.

B: New WGA for 11 previous negative samples using 5µl NBS DNA. 11 positive samples using 2µl of WGA NBS DNA in one set of PCR.



*Sample number 30 was later excluded from the study due to lack of clinical data.

Sensitivity assay for detection of *STIL-TAL1* type I deletions.

Serial dilutions of a DNA positive for *STIL-TAL* deletion were made from 10ng to 1pg each into 40ng DNA isolated from a patient with AML. Detection sensitivity of primers for C1 is this nested PCR assay was around 1 positive cell in 7000 cells.

Figure S2: DNA sequence of *STIL-TAL* deletions identified in two type I rearranged positive control DNAs.

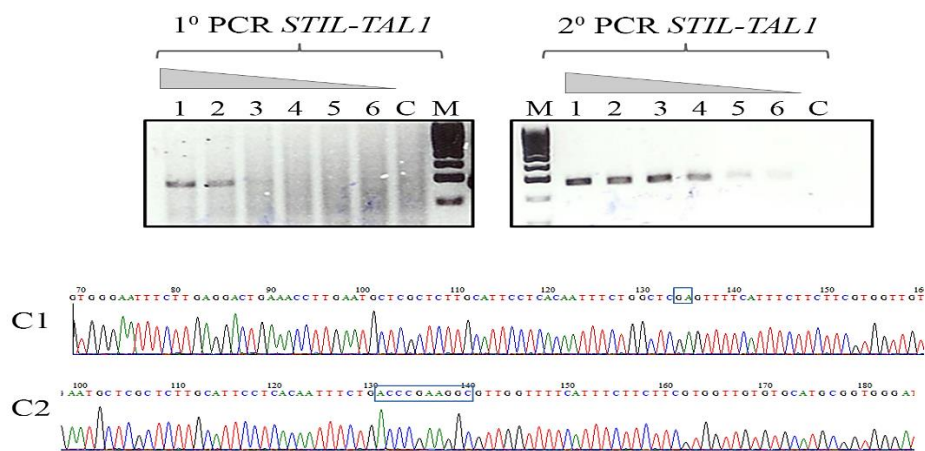


Figure S3: Nested PCR of Swedish T-ALL cases showing an absence of *STIL-TAL1* type II deletion.

